

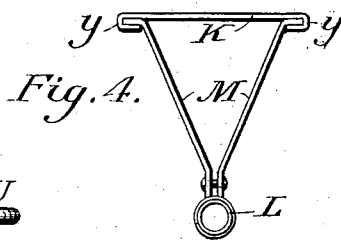
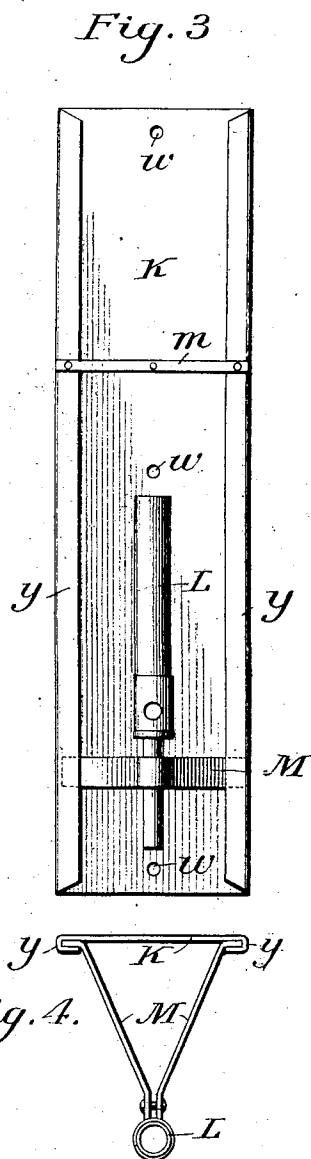
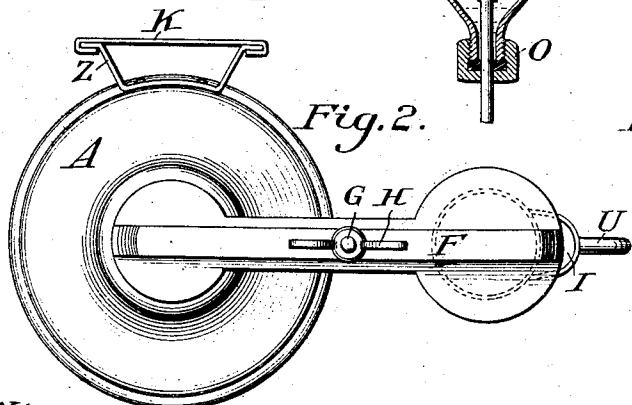
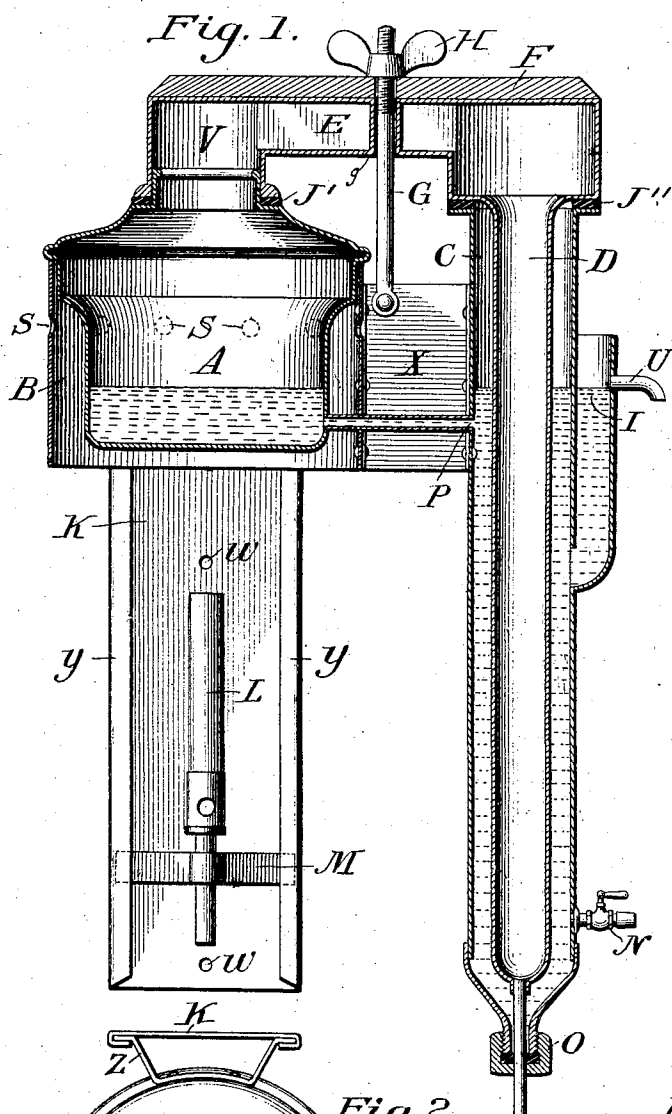
No. 771,832.

PATENTED OCT. 11, 1904.

W. ROCHLITZ.
WATER DISTILLING APPARATUS.

APPLICATION FILED NOV. 12, 1903.

NO MODEL.



Witnesses:

Feodor Windt

Geo. W. Tanner

Inventor:

William Rochlitz

UNITED STATES PATENT OFFICE.

WILLIAM ROCHLITZ, OF CHICAGO, ILLINOIS.

WATER-DISTILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 771,832, dated October 11, 1904.

Application filed November 12, 1903. Serial No. 180,956. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ROCHLITZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Water-Distilling Apparatus, of which the following is a specification.

The object of my improvement is to provide a distilling device which can be taken apart, and thus allow all parts to be thoroughly cleaned, and which will supply pure distilled water, preventing the water in the boiler from passing over into the condenser with the steam.

Figure 1 is a vertical central sectional view of the apparatus; Fig. 2, a top view of the same. Fig. 3 is a view of the support upon which the apparatus is mounted and includes the burner. Fig. 4 is a top view of the bracket and clamp which carries the burner and refers to Fig. 3.

Similar letters refer to similar parts throughout the different views.

A is a copper vessel inclosed in an outer case B, in communication with a condenser, of which C is the outer casing through which the cooling and feed water passes.

D is the condensing-tube in which the steam, passing from vessel A through tube E, is condensed into water.

I is a lateral enlargement of the casing, serving to maintain a constant water-level in the copper vessel A, (the boiler,) with which it is connected by a feed-pipe P.

N is the water-inlet, which keeps the condenser C filled and supplies the vessel A with water to the line of the waste-water outlet U.

K is a support made of heavy sheet metal, bent on the edges to the shape of two grooves *yy*, in which the clamp Z, Fig. 2, slides, holding the whole apparatus in position. K is fastened to the wall by means of wood-screws passing through the holes *ww*.

m is a stop which arrests the descent of the clamp Z, Fig. 2, and holds it in position.

M is a sheet-metal bracket into which a Bunsen burner L is inserted and which is also adjusted in the grooves *yy* of the support K.

S S, &c., denote holes in the case B through which the flue-gases escape.

J' and J'' are rubber gaskets which form

steam-tight joints at those places where the apparatus is to be disconnected when it becomes necessary to clean the vessel and condenser from deposits which always accumulate during operation. Both joints are held tight by means of the bolt G, which passes through a tube *g*, connected with the top and bottom of E in such a manner as to prevent leakage of steam from E, the bolt G being fastened by means of the thumb-screw H.

F is a block, preferably rectangular in cross-section, resting on the roof of the tube E of the condenser C and distributes a uniform pressure on the whole top of the apparatus. F may be made solid, as shown, or in the form of a tube or hollow block.

The pressure which is necessary to clamp the rubber gaskets J' J'' and obtain steam-tight joints between the steam dome or cap V and boiler A and between the end of E and the condenser C is applied by means of the thumb-screw H.

X is a sheet-metal connection riveted to casing B and condenser C, holding these parts together and serving as a support to which the bolt G is riveted.

In operation water enters through the cock N in the condenser-casing C to the height of the waste-outlet U and enters the boiler A through the pipe P, thus maintaining a head of water equal to the difference between the levels of U and P. In A the water is evaporated by means of the Bunsen burner L, and the steam passes out through dome V, tube E, and condensing-tube D, where it is condensed by the cold water rising in the outer casing C.

As the most essential characteristic of an automatic water-still is the easy accessibility of all parts where sediments are deposited from the heated water, this apparatus is constructed to achieve that end in the most practical manner. The apparatus can be removed from its support by simply moving it upward a few inches and so lifting it out entirely from the grooves *yy* in the support K, in which it rests. By loosening the thumb-screw H and packing-screw O at the bottom of the condenser C the whole condensing-tube D E F, which is attached to the dome V, can

be removed, thus by one operation laying open all parts which must be cleaned out.

What I claim as new, and desire to secure by Letters Patent, is—

- 5 1. A distilling apparatus comprising a condenser, a supply-chamber surrounding the condenser and provided with a lateral enlargement to maintain a constant water-level in the boiler with which it is connected by a
10 feed-pipe, a boiler fitted with a cap or dome communicating by means of a tube with the condenser, the tube and cap or dome being removable in one piece and held firmly in position by a thumb-screw passing through the
15 tube, making a steam-tight joint, this screw being riveted to a support X, preferably of sheet metal riveted to the condenser and cas-

ing surrounding the boiler, substantially as, and for the purposes described.

2. The combination of the condenser ar- 20
ranged with its upper end in open communication with the boiler through a tube connected with a steam cap or dome, the tube and cap or dome being connected and removable in one
piece, being held in position so as to give a 25
steam-tight joint by means of a thumb-screw attached to a support, X, riveted to the condenser and casing surrounding the boiler, substantially as described.

WILLIAM ROCHLITZ.

In presence of—

THEO. F. DECKER,
OLOF FROMBLE.